NORTON SOUND SUBDISTRICTS 2 AND 3 (GOLOVIN AND MOSES POINT) CHUM SALMON STOCK STATUS AND DEVELOPMENT OF MANAGEMENT/ACTION PLAN OPTIONS

A Report to the Alaska Board of Fisheries

By:

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SUBDISTRICTS 2 AND 3 (GOLOVIN AND MOSES POINT) CHUM SALMON STOCK STATUS

Introduction

The Golovin and Moses Point Subdistricts (Figure 1) are similar in relative species composition and level of fisheries management. Both have a history of being productive chum salmon river systems that supported substantial commercial fisheries. Streams within both subdistricts have recently demonstrate a declining tend in production.

Synopsis

In response to the guidelines established in the Sustainable Salmon Fisheries Policy, the Board of Fisheries has classified the Golovin and Moses Point Subdistricts chum salmon stock as a stock of concern. This classification is based on the definition of "yield concern" found in the policy. The Golovin and Moses Point Subdistricts chum salmon stock meets the definition of a yield concern based on low harvest levels since 1995 (Table 2) and the anticipated low harvest level in 2001. Spawning escapement assessments tend to vary each year depending on location, but it appears that the Kwiniuk River tower escapement goal has been met since 1994 with the exception of 1999 and 2000 (Table 1 and Figures 2 and 3).

Escapement

In the past, both subdistricts have had cycles of weak runs with low escapements that responded well to restrictive management actions (Table 3). However, since 1989, chum salmon runs to both subdistricts have had some difficulty providing for subsistence and escapement needs even when commercial harvests have been greatly reduced or eliminated. Assessment of spawning escapement through aerial surveys has not always been possible. In some cases the Kwiniuk River Tower is used to judge the neighboring Tubutulik River based on the assumption they have similar runs, environmental conditions, and levels of exploitation.

1995

- Chum salmon escapements achieved for all index areas.

1996

- Chum salmon escapements achieved for most streams in both subdistricts.

1997

- Chum salmon escapements achieved for two of the three index streams.

1998

- Chum salmon escapements below goals in two of the three index streams.

1999

- Chum salmon escapements below goals in all three index streams.

2000

- Chum salmon escapements below goals in all three index streams.

Harvest

Commercial harvests declined rapidly during the late 1980's for both subdistricts. Since 1990, limited, directed commercial fishing, targeting chum salmon has occurred occasionally. Recent chum salmon harvests have occurred incidentally in directed pink and coho salmon fisheries. Subsistence chum salmon harvests have not been a concern, with the exception of the Kwiniuk River in 1993, when spawning areas were closed to subsistence fishing.

1995

- No subsistence restrictions.
- Incidental commercial chum salmon harvest allowed during directed pink and coho salmon fisheries.

1996, 1997, and 1998

- No subsistence restrictions.
- Incidental commercial chum salmon harvest allowed during directed pink and coho salmon fisheries.

1999

- No subsistence restrictions.
- No commercial fishing for any salmon species because of the poor salmon runs in both subdistricts.

2000

- No subsistence restrictions.
- Incidental commercial chum salmon harvest allowed during directed pink and coho salmon fisheries.

Outlook

The year 2001 chum salmon outlook for both the Golovin and Moses Point Subdistricts suggests weak runs. Based on the recent trend of declining runs derived from parent years with acceptable escapements, it is expected that productivity will continue to be poor.

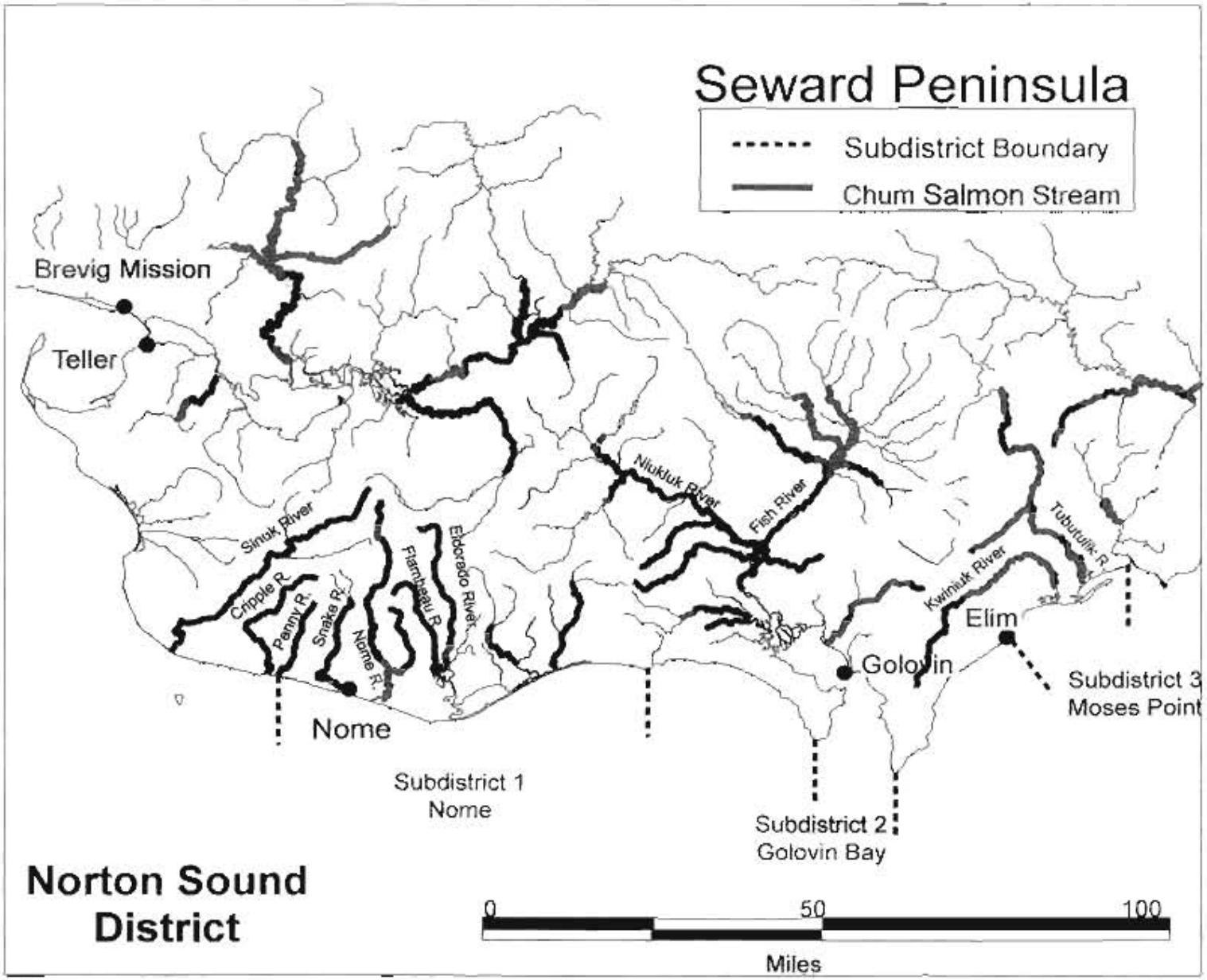
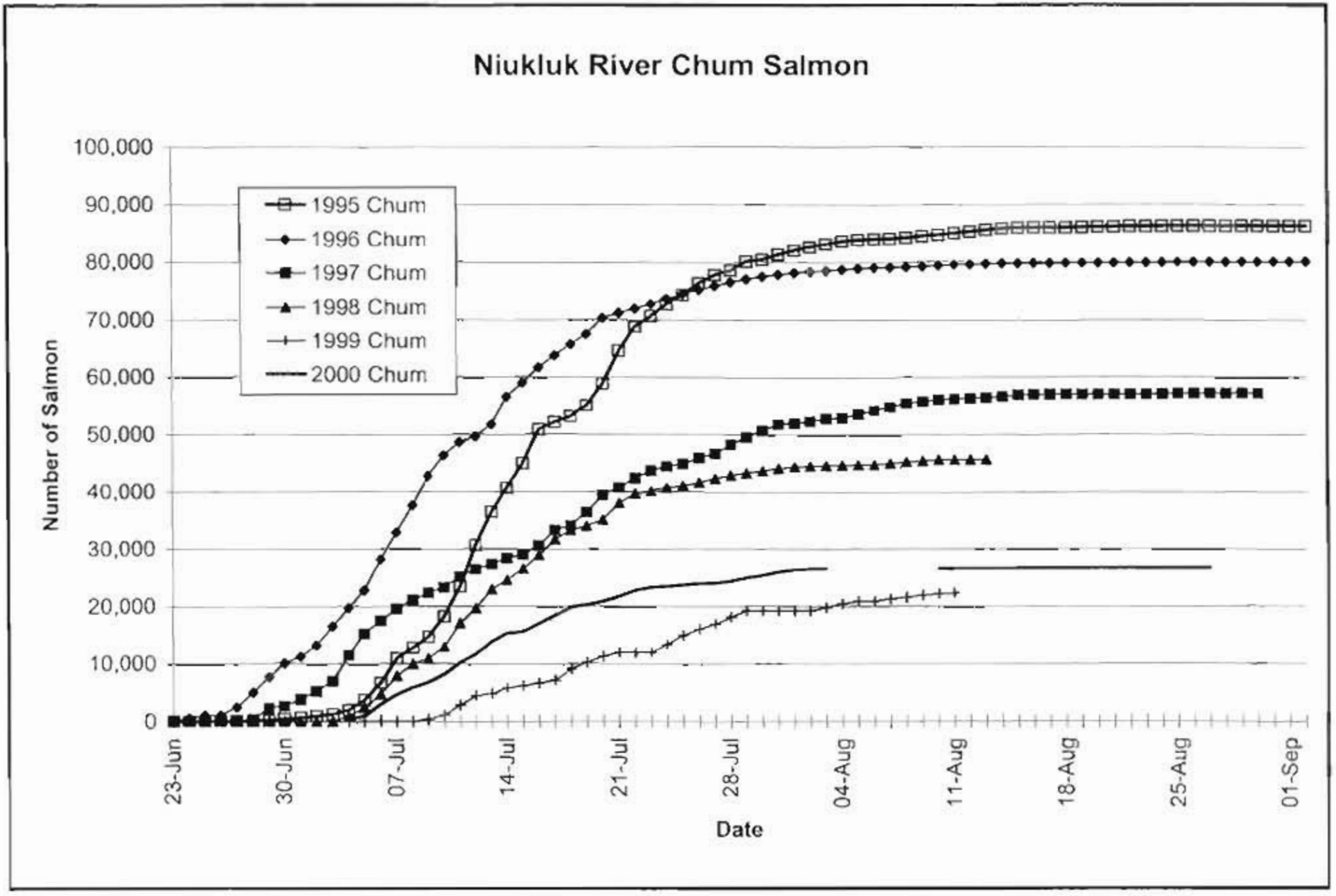


Figure 1. Known chum salmon streams in Norton Sound.



Fig' 2. Niukluk River tower cumulative escapement cou' 's of chum salmon.

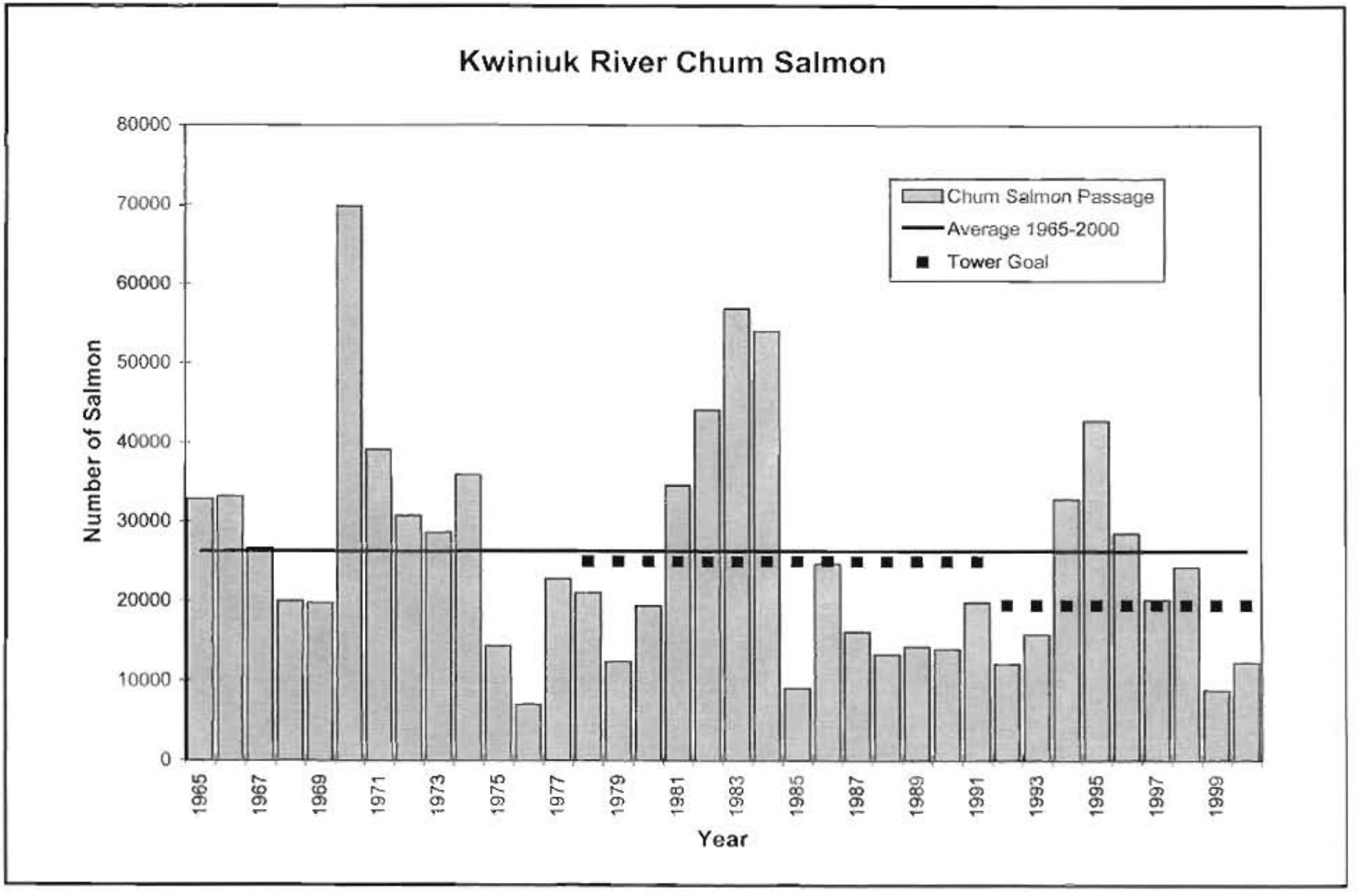


Figure 3. Kwiniuk River tower chum salmon escapement, 1965 - 2000.

Table 1. Commercial and subsistence chum salmon harvests by subdistrict, by year, Norton Sound District, 1961-2000.[a]

Year	Nome (1)		Golovin (2)		Moses Point (3)		Norton Bay (4)		Shaktoolik (5)		Unalakleet (6)		Combined Totals	
	Commercial	Subsistence	Commercial	Subsistence	Commercial	Subsistence	Commercial	Subsistence	Commercial	Subsistence	Commercial	Subsistence	Commercial	Subsistence
1961	0	-	0	-	0	-	0	-	24,746	-	23,586	-	48,332	-
1962	0	-	68,720	-	58,883	-	24,380	-	8,718	-	30,253	-	182,764	-
1963	0	-	49,850	9,319	46,274	6,316	12,489	-	19,153	-	27,003	-	164,749	-
1964	1,194	-	58,301	-	28,568	348	5,916	-	35,272	5,412	19,911	6,726	148,882	-
1965	1,941	1,825	0	3,847	0	9,857	0	3,032	6,356	3,420	26,488	8,791	36,795	30,772
1966	681	1,762	29,791	3,520	24,741	5,469	0	3,812	8,292	4,183	16,840	3,387	80,245	21,873
1967	408	827	31,199	4,803	0	9,913	0	2,945	1,855	4,436	8,502	-	41,756	-
1968	102	821	18,011	1,744	17,908	2,527	0	1,872	2,504	1,915	14,865	2,982	65,390	11,861
1969	601	508	20,949	2,514	28,594	1,303	3,974	5,859	8,645	3,438	22,032	4,196	82,795	15,815
1970	960	458	20,598	2,814	29,726	8,969	0	3,500	15,753	2,016	40,029	7,214	107,024	22,762
1971	2,315	2,900	33,824	1,936	43,531	2,227	0	2,619	13,399	5,060	37,543	7,073	130,912	21,815
1972	2,843	315	27,097	2,026	30,919	2,070	7,799	2,022	12,022	3,399	20,440	4,132	100,929	13,966
1973	1,132	1,863	41,889	74	31,389	298	4,872	130	14,500	1,397	25,716	3,426	119,098	7,188
1974	16,431	183	30,173	205	85,278	1,723	3,826	900	26,391	358	36,170	588	182,267	3,957
1975	8,364	2,858	41,791	2,025	46,699	508	17,385	361	49,536	334	48,740	2,038	212,495	8,124
1976	7,820	1,705	30,218	1,128	10,890	1,548	7,161	236	15,798	269	24,269	2,832	95,956	7,718
1977	15,996	12,192	53,912	2,915	47,455	1,170	13,563	2,055	36,591	2,190	32,936	6,085	200,655	26,607
1978	8,782	4,295	41,462	1,061	44,505	1,229	21,973	1,069	35,388	1,170	37,079	3,442	189,279	12,257
1979	5,391	3,273	30,201	2,540	37,123	1,195	15,599	1,409	22,030	1,670	30,445	1,597	140,789	11,973
1980	13,922	5,983	52,609	4,057	14,758	1,303	7,855	1,132	27,453	1,827	64,106	5,230	180,752	19,532
1981	18,666	8,579	58,323	5,543	29,325	2,819	3,111	3,515	21,097	3,490	39,186	4,235	169,708	28,181
1982	13,447	4,611	51,970	1,888	40,035	3,537	7,128	2,485	28,240	1,165	44,520	4,894	183,339	18,580
1983	11,691	7,091	48,283	-	46,776	-	17,157	-	67,319	-	109,220	4,401	316,437	-
1984	3,744	4,665	54,153	-	9,477	-	3,442	-	32,259	-	43,317	3,346	146,442	-
1985	8,219	5,667	55,781	3,527	24,486	947	9,948	-	13,403	298	25,111	1,898	134,908	-
1986	8,160	8,085	69,725	-	20,658	-	1,994	-	16,126	-	30,239	-	146,912	-
1987	5,846	8,394	44,334	-	17,279	-	3,588	-	14,086	-	17,525	-	102,457	-
1988	1,628	5,952	33,348	-	18,585	-	7,521	-	21,521	-	25,383	-	107,986	-
1989	492	3,399	0	-	167	-	0	-	19,641	-	20,825	1,368	41,125	-
1990	0	3,246	15,983	-	3,723	-	0	-	21,748	-	23,669	-	65,123	-
1991	0	3,715	14,839	-	804	2,660	0	-	31,619	-	39,609	-	86,871	-
1992	881	1,684	1,002	-	6	1,200	1,787	-	27,867	-	52,547	-	84,090	-
1993	132	1,766	2,803	-	167	1,035	1,378	-	20,864	-	28,156	-	53,500	-
1994	66	1,673	111	1,337	414	3,476	9	4,581	5,411	1,221	12,288	12,732	18,299	25,020
1995	122	8,344	1,967	10,379	1,171	3,774	6	5,328	14,775	2,480	24,843	13,490	42,898	41,259
1996	3	4,333	0	2,867	0	2,319	0	4,161	3,237	4,425	7,369	16,481	10,609	34,586
1997	0	4,909	8,003	4,891	2,883	2,064	931	4,040	5,747	1,612	17,135	7,649	34,103	25,252
1998	0	984	723	1,893	2,311	1,576	0	6,192	7,090	1,034	6,210	2,551	16,324	14,010
1999	0	337	0	3,956	0	744	0	4,153	2,181	467	5,700	3,892	7,881	13,049
2000	0	[b]	164	[b]	535	[b]	0	[b]	2,751	[b]	2,700	[b]	6,150	[b]
5-year avg.[c]	25	3,135	2,143	4,736	1,213	2,065	106	4,879	8,604	2,004	12,252	8,787	22,363	25,631
10-year avg.[c]	120	2,908	4,548		1,128		379		14,053		21,752		41,999	

[a] 1995-1999

[b] 1990-1999

[c] Subsistence harvest are incomplete prior to 1979.

[b] Data not yet available.

Table 2. Assessment of Norton Sound chum salmon escapements, 1995-2000.

Location	1995-1999 Average Estimate or Goal	1995 Estimate	1995 Assessment Made Goal or Average?	1996 Estimate	1996 Assessment Made Goal or Average?	1997 Estimate	1997 Assessment Made Goal or Average?	1998 Estimate	1998 Assessment Made Goal or Average?	1999 Estimate	1999 Assessment Made Goal or Average?	2000 Estimate	2000 Assessment Made Goal or Average?
Sinuk River													
Aerial Survey	3,600-7,200 (Goal)	3,110	No	1,815 (early)	Unknown	2,975	No	630 (incomplete)	Unknown	no survey	Unknown	10 (incomplete)	Unknown
Snake River													
Tower	4,980 (Estimate)	4,393	Below avg.	2,772	Below avg.	6,184	Above avg.	11,067	**Above avg.**	484	Below avg.	1,400*	Below avg.
Aerial Survey	800-1,600 (Goal)	No Survey	Unknown	405	No	No Survey	Unknown	2,057	Yes	400 (incomplete)	Unknown	59 (incomplete)	Unknown
Nome River													
Tower/Weir	3,117 (Estimate)	5,092	**Above avg.**	3,339	**Above avg.**	5,131	**Above avg.**	976	Below avg.	1,048	Below avg.	4,051*	**Above avg.**
Aerial Survey	1,600-3,200 (Goal)	1,855	Yes	799 (incomplete)	Unknown	956 (incomplete)	Unknown	335 (incomplete)	Unknown	375 (incomplete)	Unknown	658 (incomplete)	Unknown
Eldorado/Flambeau Rivers													
Eldorado Tower	16,970 (Estimate)	39,867	**Above avg.**	12,655	Below avg.	14,302	Below avg.	13,808	**Below avg.**	4,218	Below avg.	10,604*	Below avg.
Eldorado, Flambeau Rivers Combined Aerial Survey	5,200-10,400 (Goal)	16,220	Yes	26,100 (incomplete)	Yes	4,340 (incomplete)	Unknown	no survey	Unknown	1,796 (incomplete)	Unknown	4,202 (incomplete)	Unknown
Bonanza River													
Aerial Survey	1,000-1,900 (Goal)	0 (incomplete)	Unknown	1,980 (incomplete)	Yes	881 (incomplete)	Unknown	no survey	Unknown	361 (incomplete)	Unknown	1,130 (incomplete)	Yes
Solomon River													
Aerial Survey	300-550 (Goal)	315	Yes	323	Yes	316 (incomplete)	Yes	90 (incomplete)	Unknown	51 (incomplete)	Unknown	150 (incomplete)	Unknown
Fish River													
Niukluk Tower	60,917	86,333	**Above avg.**	80,121	**Above avg.**	57,304	Below avg.	45,587	**Below avg.**	35,240	Below avg.	26,724*	Below avg.
Niukluk, Boston, Fish Rivers Combined Aerial Survey Index	23,200-46,400 (Goal)	43,012	Yes	19,077 (incomplete)	Unknown	40,500 (incomplete)	Yes	4,126 (incomplete)	Unknown	640 (incomplete)	Unknown	No Survey	Unknown
Kwiniuk River													
Kwiniuk Tower	15,600-31,200 (Goal)	42,703	Yes	28,493	Yes	20,118	Yes	24,248	Yes	8,783	No	12,251*	No
Tubutulik River													
Aerial Survey	13,600-27,200 (Goal)	16,518	Yes	10,790 (incomplete)	No	3,105	No	10,060	No	no survey	Unknown	No Survey	Unknown
Unalakleet River													
North Tower	5,543 (Estimate)^	no project	n/a	9,789 (incomplete)	**Above avg.**	6,904 (incomplete)	**Above avg.**	5,421 (incomplete)	Below avg.	5,600 (incomplete)	**Above avg.**	3,717*	Below avg.
Unalakleet Test Fish	943 (Index)	1,101	**Above avg.**	1,424	**Above avg.**	743	Below avg.	492	Below avg.	956	**Above avg.**	1,083	**Above avg.**
Unalakleet, Old Woman Rivers Combined Aerial Survey Index	2,400-4,800 (Goal)	6,080	Yes	296 (incomplete)	Unknown	4,840 (incomplete)	Yes	1,230 (incomplete)	Unknown	no survey	Unknown	no survey	Unknown

* Preliminary estimate.

^ Average estimate includes years 1996-1999.

Note: "Incomplete" survey indicies a survey was flown, but not used in the "Goal" assessment due to timing or survey conditions.

Table 3. Golovin and Moses Point Subdistricts Management Actions

1961	-District-wide fishing schedule standard two 48 hour periods per week. -Commercial fishing allowed in marine waters only. -100 fathoms maximum length allowable gear.
1962	Formation of six Management Subdistricts (S.D.) with authority to adjust fishing time.
1969	Beach seines allowed in Golovin S.D. as commercial gear for pink salmon by E.R.
1977	Kwiniuk River escapement goal of 20,000 chum salmon established due to low returns in 1975 and 1976.
1979	Kwiniuk River escapement goal of 25,000 chum salmon established due to low returns in 1975 and 1976 and rebuild the stock.
1980	-Management authority to restrict gillnet mesh size to 4 ½" maximum allowed the ability to open pink salmon directed fishing periods. -Moses Point S.D. periods length reduced to half the standard length.
1985	-Commercial seasons to be opened by Emergency order between June 8 and June 20 and close by Regulation on August 31. -Moses Point S.D. returned to the standard two 48 hour fishing periods per week schedule. -Management closed ½ of Moses Point S.D. due to low chum returns.
1986	Management closed 4 periods in Moses Point S.D. due to low chum returns.
1987	Management closed 5 periods in Moses Point S.D. due to low chum returns.
1988	-Management authority to restrict gillnet mesh size to 6" maximum allowed the ability to direct the fishery toward a target species. -Management restricted the Moses Point S.D. to pink gear only and closed fishing periods to protect the weak chum return.
1989	Management reduced period length in the Golovin S.D. and closed the Moses Point S.D. during most of the chum run to protect the weak return.
1990	Moses Point S.D. restricted half the season to pink gear during weak chum run.
1991	Moses Point S.D. open only one period during weak chum run.
1992	-Management Plan for the Golovin S.D. established a maximum harvest level of 10,000 chum salmon to preserve the stock and allowed directed fisheries on other species only if survey data indicated adequate chum escapements would likely be achieved.

	-The Kwiniuk River escapement goal was reduced to 19,500 chum past the counting tower. -The Moses Point Management Plan allowed only one directed chum commercial period during the anticipated weak chum run.
1993	-Management restricted the Golovin S.D. to special pink salmon periods with limited gear and harvest areas to avoid high incidental catches of chum which could have terminated the pink salmon fishery since the 10,000 chum cap was in effect again. -The Moses Point S.D. did not open for chinook or pink salmon due to the chance of potentially harvesting a portion of the depressed chum salmon stocks. Subsistence fishing restrictions were imposed that protected chum salmon on the spawning grounds.
1994	-Golovin S.D. continued 10,000 fish chum salmon cap management plan, but no harvest due to no market. -Moses Point management plan for no directed commercial chum fishery and only allow a pink fishery if adequate chum were available, however no market interest.
1995	No change in management plans in either subdistrict with some chum salmon caught during directed pink and coho fisheries.
1996	No change in management plans in either subdistrict with some chum salmon caught during directed pink and coho fisheries.
1997	No change in management plans in either subdistrict with some chum salmon caught during directed king periods except for the Golovin S.D. chum capacity was liberalized to 15,000 fish prior to July 15.
1998	-One commercial king period allowed to offset incidental catches when chum periods were common. -Pink directed period opened continuously with the buyer scheduling fishing to maximize transportation and production. -Strong coho run attracted limited market.
1999	-No commercial periods for any salmon species due to poor returns. -Sport and subsistence coho closures in Golovin Subdistrict.
2000	-Directed pink and coho fisheries land small numbers of chum salmon through use of gear and time restrictions.

SECTION II

DEVELOPMENT OF MANAGEMENT/ACTION PLAN OPTIONS FOR NORTON SOUND SUBDISTRICTS 2 AND 3 (GOLOVIN AND MOSES POINT) SALMON STOCKS OF CONCERN AS OUTLINED IN THE SUSTAINABLE FISHERIES POLICY

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SECTION II

NORTON SOUND SUBDISTRICTS 2 AND 3 (GOLOVIN AND MOSES POINT) CHUM SALMON MANAGEMEN/ACTION PLAN REVIEW AND DEVELOPMENT

Current Stock Status

In response to the guidelines established in the Sustainable Salmon Fisheries Policy, the Board of Fisheries during the September 28-29, 2000 work session classified the Subdistricts 2 and 3 chum salmon stocks as a yield concern. This determination was based on the inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above the stock's escapement needs since 1997 and the anticipated low harvest level in 2001.

C&T Use Finding And The Amount Necessary For Subsistence

The Board of Fisheries made a positive Customary and Traditional Use finding for all salmon in the Norton Sound-Port Clarence Area. Further, the Board determined the Amount Necessary for Subsistence (ANS) to be 96,000 to 160,000. Since subsistence fishing restrictions targeting the chum salmon stocks are very rare in these subdistricts and the Department is not anticipating the need for restrictions, it is believed that a revision to the ANS finding is unnecessary at this time.

Habitat Factors Adversely Affecting the Golovin and Moses Point Subdistrict Chum Salmon Stock

Subdistrict 2

The Norton Sound/Bering Strait Regional Comprehensive Salmon Plan 1996 – 2010 (Norton Sound/Bering Strait Regional Planning Team, 1996) briefly mentions that the population of Council, on the Niukluk River was 10,000 people during the Gold Rush (page 45). Damage to fish habitat from mining would have occurred 50 to 100 years ago and is not thought by area staff to be the limiting factor now in chum salmon production. Available spawning habitat appears to be more than adequate for the numbers of fish returning. The extent to which mining reduced the available spawning and rearing habitat is not known. There is occasional small-scale mining activity on Ophir Creek, which is not now known for chum salmon production. Oral history indicates Ophir Creek used to be predominately a chum salmon producer. Historic dredging left numerous dredge ponds. Beaver activity has intensified morphological changes in the creek. The system primarily produces coho salmon now. The increasing presence of beavers appears to be a common agent of habitat change throughout the area. Most chum-producing streams are too large to close off with a dam, but there are a few like Iron Creek near Moses Point, which have been transformed from chum to coho

producers. Likely there are others with very small impacts that could add up or indicate a trend in changing environment. The Casadepaga River has both small-scale mining and significant chum salmon production.

Subdistrict 3

A perched culvert in Iron Creek along the Moses Point to Elim Road is a barrier to fish passage (pink, chum and coho salmon) at all but high tidal stages. Local residents have manually transported spawning stocks around the culvert for at least the past two years. The Bureau of Indian Affairs initially installed the culvert. The BIA has initiated discussions with ADF&G to design and permit a culvert retrofit that will provide fish passage.

Projects Needed

1. Survey of the loss of chum salmon spawning and rearing habitat due to mining in the Niukluk River drainage and an assessment of the feasibility and cost of restoration.

2. Replace/retrofit the Iron Creek culvert to eliminate barriers to upstream fish passage.

Literature Sources

Norton Sound/Bering Strait Regional Planning Team. 1996. Norton Sound/Bering Strait Regional comprehensive salmon plan 1996-2010. Alaska Department of Fish and Game. 128 pp.

Do New or Expanding Fisheries on This Stock Exist?

There are no new or expanding fisheries on this stock. There are three proposals (#'s 125, 128, and 129) which would allow the use of an additional fishing gear type or modify the escapement based chum salmon management.

Draft Management Plan

Board reviews existing management plan for consistency with principles and criteria of Sustainable Salmon Fisheries Policy or adopts new management for the stock consistent with the principles and criteria of the Sustainable Salmon Fisheries Policy. A draft management plan has been laid out incorporating mixed species management as requested in the November 2000 work session:

5 AAC 04.3XX. SUBDISTRICTS 2 AND 3 SALMON MANAGEMENT PLAN.

(a) The objective of this plan is to provide guidelines for management of the commercial salmon fisheries which will result in sustained yields of the Subdistricts 2 and 3 salmon stocks large enough to provide for subsistence needs and other historical uses.

(b) It is the intent that the Subdistrict 2 and 3 chum salmon stocks be managed in a conservative manner consistent with sustained yield principles and the subsistence priority and, consistent with this intent, that the available surpluses of other salmon stocks be allowed opportunity for harvest. To accomplish these objectives, the department shall manage the Subdistrict 2 and 3 commercial salmon fisheries as follows:

(1) In Subdistrict 2 a maximum commercial chum salmon harvest of 15,000 may occur prior to the time that the chum salmon return strength can be assessed in mid-July. This allows for some harvest of chum salmon when fish quality is at its best and to allow for harvest of pink salmon while providing time for the run to develop adequately for chum salmon assessment.

(2) In Subdistrict 3 directed commercial chum salmon fishing may occur only when it is projected that subsistence needs will be met and the upper end of the established chum salmon escapement goals will be exceeded.

(3) Pink salmon directed fisheries will be conducted so as to maintain a minimum ratio of 20 pink salmon to 1 chum salmon through the use of gear, time and area restrictions.

(4) Coho salmon directed fisheries will be conducted:

a. after index streams have attained chum salmon escapement goals, or
b. when the ratio of coho to chum salmon greater than 1:1 can be maintained, or
c. when continued restrictions would have little benefit in increasing chum salmon escapement.

(5) Subsistence fishing will be restricted by emergency order only after all directed commercial and sport fishing for chum salmon has been closed in the subdistrict.

Escapement Goal Review

The Department is undertaking a review of escapement goals for several AYK salmon stocks where adequate long term escapement, catch, and age composition data exist that enable the development of biological escapement goals based on analysis of production consistent with the Department's escapement goal policy. Stocks pertinent to this report include: Kwiniuk and Tubutulik River chum salmon in Norton Sound, and Norton Sound Subdistrict 1 chum salmon. The intent of the review is to recommend scientifically defensible biological escapement goals for these stocks. A detailed report will be published for each of these stocks, documenting the available data, methods for reconstruction of long-term age specific runs and recruits from parent escapement, analysis of the relationship between the parent spawning stock and recruits, or progeny, and recommended biological escapement goals. These reports will be prepared and,

following an internal review and approval by the AYK Biological Escapement Goal review committee, will be provided for public review by December 20, 2000.

List of current and proposed BEG, or SEG's for Subdistrict 2 and 3 chum salmon stocks.

Stream	Current Goal	Proposed Goal
Fish/Niukluk/Boston River Aerial	> 28,000 BEG	Not Reviewed
Kwiniuk River Tower	> 18,000 BEG	10,000 - 20,000 BEG
Tubutulik River Aerial	> 12,000 BEG	8,000 – 16,000 [1] BEG

[1] Total Spawners

Identify Research Needed On Stock

A Norton Sound Research Initiative committee has been formed that is identifying and prioritizing research needs in response to the current low chum salmon stock status in much of Norton Sound. This initiative seeks to increase escapement monitoring and advance understanding of the factors involved in salmon production studies of juvenile salmon and environmental conditions.

Current escapement monitoring:

- Kwiniuk Tower, Moses Point Subdistrict, 1965-2000
- Niukluk Tower, Golovin Subdistrict, 1979, 1995-2000
- Aerial Surveys

Past escapement monitoring:

- Tubutulik Tower, Moses Point Subdistrict, 1980
- Kachauvik Tower, Golovin Subdistrict, 1977

Other Past Research:

- Marine waters tagging, Norton Sound District, 1978 and 1979

ACTION PLAN DEVELOPMENT

Subdistricts 2 and 3 Chum Salmon Rebuilding Plan Goal

Reduce fishing mortality in order to meet spawning escapement goals, to provide for subsistence levels within the ANS range, and to reestablish historic range of harvest levels by other users.

Action Plan Alternatives

ACTION #1.
Provide the Department authority to restrict subsistence harvest of salmon to gillnets of 4 1/2-inch mesh or smaller by emergency order when necessary to reduce harvest rate on chum salmon and provide opportunity to harvest pink salmon.

Objective
To provide a management tool that could direct subsistence harvest on abundant pink salmon stocks if it is necessary to reduce the potential harvest of chum salmon stocks of concern. Subsistence fishermen would have a greater opportunity to harvest alternative salmon species rather than forego potential harvests in efforts to protect weak chum salmon stocks.

Specific action recommended to implement the objective
Create a regulation under 5 AAC 01.170 LAWFUL GEAR AND GEAR SPECIFICATIONS that allows the department to restrict gillnets to a 4 ½ inch maximum mesh size by emergency order. Pink salmon are abundant primarily during even-numbered years. Management of the subsistence fishery would use time and/or area and gear restrictions to provide for reasonable opportunity while allowing chum salmon to pass through lower river and marine areas. Management would open and close subsistence fishing seasons, establish subsistence fishing periods, and implement gear specifications by emergency order based upon inseason run assessment.

Benefits
Chum and pink salmon runs overlap in the Golovin and Moses Point Subdistricts. Under current management authority, subsistence gillnet mesh size cannot be specified which could target harvest on pink salmon. However, the department can restrict gear type which is often viewed as allocative between different types of fishing operations. This action would allow subsistence gillnet fishermen an opportunity to harvest pink salmon in the time and areas most commonly used historically by that gear type. Golovin and Moses Point Subdistrict streams are managed based upon inseason assessments of the actual runs. When a very low chum salmon run is expected, mixed with a high pink salmon run, gillnet fishermen could fish earlier in the run when the weather is good rather than switching gear types, traveling further from camp, and fishing later in the season.

Detriments
Currently subsistence harvest levels cannot be determined inseason. Management of the subsistence fishery could be overly restrictive or too lenient prior to obtaining complete run abundance information. Low subsistence harvests of chum salmon incidental to a directed subsistence pink salmon fishery may be too excessive for the small stocks in some areas.

Subsistence issues/considerations

This Action Alternative helps to provide subsistence fishers additional opportunity to harvest pink salmon when chum salmon stacks are at a low level in the mixed fishery.

Performance measures

The department encourages fishermen to keep track of their subsistence salmon harvest with regards to gear type, date and fishing location. Inseason salmon run assessment will be based on two counting towers and aerial surveys. Harvest levels would be determined post season through subsistence surveys. Postseason analysis will apportion harvest information by species, effort, stream, and gear type.

Research plan to address stock of concern

Additional gear categories would be added to the subsistence database to track harvest post-season as measure of affect.